

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 - 8 (Cancelled).

9. (Currently Amended) A method for using at least one hormone/toxin conjugate to sterilize an animal, said conjugate comprising a peptide hormone ~~capable of~~ binding to a GnRH receptor, conjugated by a linking agent to a toxin group selected from the group consisting of a chemical toxin, a single chain toxin, and a modified toxin having an intrinsic toxic group lacking a functional binding domain, said conjugate ~~capable of~~ selectively binding to a gonadotroph and ~~of~~ substantially precluding said gonadotroph from secreting gonadotropins, said method comprising administering an effective amount of said conjugate to said animal to substantially preclude secretion of gonadotropins by said animal's gonadotrophs, wherein said conjugate ~~is capable of crossing~~ the cell membrane of a gonadotroph and wherein said peptide hormone has the general formula

pyroGlu-His-Trp-Ser-Tyr-X-Leu-Arg-Pro,

wherein X is an amino acid selected from the group consisting of lysine, D-lysine, ornithine, D-ornithine, glutamic acid, D-glutamic acid, aspartic acid, D-aspartic acid, cysteine, D-cysteine, tyrosine and D-tyrosine.

10. (Previously Added) The method of Claim 9, wherein said method is effective to temporarily sterilize said animal.

11. (Previously Added) The method of Claim 9, wherein said peptide hormone is GnRH or an analog thereof wherein said peptide hormone has the general formula
- pyroGlu-His-Trp-Ser-Tyr-X-Leu-Arg-Pro,
- 5 wherein X is an amino acid selected from the group consisting of lysine, D-lysine, ornithine, D-ornithine, glutamic acid, D-glutamic acid, aspartic acid, D-aspartic acid, cysteine, D-cysteine, tyrosine and D-tyrosine.
12. (Previously Added) The method of Claim 9, wherein said peptide hormone has GnRH-ethylamide.
13. (Currently Amended) The method of Claim 9, wherein said toxin group comprises a recombinantly produced protein that inhibits protein biosynthesis.
14. (Previously Added) The method of Claim 9, wherein said modified toxin is selected from the group consisting of modified ricin toxins, modified modeccin toxins, modified abrin toxins, modified diphtheria toxins, modified Pseudomonas exotoxins and modified shiga toxins.
15. (Previously Added) The method of Claim 9, wherein said single chain toxin is selected from the group consisting of pokeweed antiviral protein, α -amanitin,

gelonin ribosome inhibiting protein ("RIP"), barley RIP, wheat RIP, corn RIP, rye RIP, flax RIP, and modified forms thereof.

16. (Previously Added) The method of Claim 9, wherein said chemical toxin is selected from the group consisting of melphalan, methotrexate, nitrogen mustard, doxorubicin and daunomycin.

17. (Previously Added) A method of Claim 9, wherein said toxin group is selected from the group consisting of modified diphtheria toxins and modified *Pseudomonas* exotoxins, wherein said toxin group comprises a toxic domain and a translocation domain but lacks a functional toxin cell binding domain.

18. (Previously Added) The method of Claim 9, wherein said linking agent is selected from the group consisting of 2-iminothiolane, N-succinimidyl-3-(2-pyridyldithio) propionate (SPDP), 4-succinimidylloxycarbonyl- α -(2-pyridyldithio)-toluene (SMPT), m-maleimidobenzoyl-N-hydroxysuccinimide ester (MBS), N-succinimidyl(4-iodoacetyl)aminobenzoate (SIAB), succinimidyl 4-(p-maleimidophenyl)butyrate (SMPB), 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide (EDC), bis-diazobenzidine and glutaraldehyde.

19. (Previously Added) The method of Claim 9, further comprising challenging said animal with GnRH at least about four weeks after said step of administering said conjugate to said animal, said challenging not inducing substantial secretion of luteinizing hormone by said animal.

20. (Previously Added) The method of Claim 19, wherein said method of administering said conjugate is repeated at least once over a time period such that administration of said conjugate does not elicit a substantial production of antibodies against said conjugate.

21. (Previously Added) A method for using at least one hormone/toxin conjugate to functionally inactivate cells whose membranes contain receptors for GnRH, said conjugate comprising a peptide hormone ~~capable of binding~~ that binds to a GnRH receptor conjugated by a linking agent to a toxin group, said method comprising
5 administering an effective amount of said conjugate to an animal to chemically attack said cells, and wherein said peptide hormone has the general formula

pyroGlu-His-Trp-Ser-Tyr-X-Leu-Arg-Pro,

wherein X is an amino acid selected from the group consisting of lysine, D-lysine,
10 ornithine, D-ornithine, glutamic acid, D-glutamic acid, aspartic acid, D-aspartic acid, cysteine, D-cysteine, tyrosine and D-tyrosine.

22. (Currently Amended) A method for functionally inactivating gonadotrophs in the pituitary gland of an animal, comprising administering to said animal an effective amount of a hormone/toxin conjugate comprising a peptide hormone conjugated to a toxin group, wherein said conjugate ~~is capable of~~ selectively binding with receptors on said gonadotrophs to render said gonadotrophs essentially incapable of secreting gonadotropins, wherein said animal is not weakened or killed by said method and wherein said peptide hormone has the general formula

pyroGlu-His-Trp-Ser-Tyr-X-Leu-Arg-Pro,

wherein X is an amino acid selected from the group consisting of lysine, D-lysine, ornithine, D-ornithine, glutamic acid, D-glutamic acid, aspartic acid, D-aspartic acid, cysteine, D-cysteine, tyrosine and D-tyrosine.